# Work Order ID 66402

*Monday, February 14, 2011 3:13:02 PM*



**Item ID:** D206-667-103BL
**Revision ID:**
**Item Name:** Crosstube Fwd, Blue
**Start Date:** 2/15/2011 **Start Qty:** 1.00
**Required Date:** 3/1/2011 **Req'd Qty:** 1.00
**Reference:**

Accept

Blue

**Cust Item ID:**
**Customer:**

**Setup Start**
**Stop**

**Run Start**
**Stop**

**Approvals:** **Process Plan:** MF **Date:** 11-02-14 **Tooling:** _____ **Date:** _____
**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| **Draw Nbr** / **Revision Nbr** | | | | | | | | | |
| D206-667-147 | | | | | | | | | |
| 100 | | 0.00 | | | | | | | |
| DC | DOCUMENT CONTROL | | | | | | | | |
| Document Control | **Memo** Photocopy bluefile and create labels as per PPP D206-667-103 CHG004 | 0.00 | | | | | | | |
| 110 | Pick Kit | 0.00 | | | | | | | |
| Packaging | Packaging | | | | | | | | |
| Packaging | **Memo** | 0.00 | | | | | | | |
| 120 | | 0.00 | | | | | | | |
| CNC Bend 2 | BENDING MACHINE - CROSSTUBES | | | | | | | | |
| CNC Alpha 160 Bender | **Memo** Bend tube as per Dwg D206-667-143 using CNC bender program | 0.00 | | | | | | | |

8/16/18

for BG 11-3-18

11-3-3

11-3-3

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

# Work Order ID 66402

*Monday, February 14, 2011 3:13:02 PM*



**Item ID:** D206-667-103BL
**Revision ID:**
**Item Name:** Crosstube Fwd, Blue
**Start Date:** 2/15/2011 **Start Qty:** 1.00
**Required Date:** 3/1/2011 **Req'd Qty:** 1.00
**Reference:**

**Accept**

**Setup Start**
**Stop**

**Cust Item ID:**
**Customer:**

**Run Start**
**Stop**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 130 | QC15- Crosstube Dimensional Check | 0.00 | | | | | | | |
| QC | **Memo** | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

# Work Order ID 66402

*Monday, February 14, 2011 3:13:02 PM*



**Item ID:** D206-667-103BL **Accept** **Setup Start** **Stop**

**Revision ID:**

**Item Name:** Crosstube Fwd, Blue

**Start Date:** 2/15/2011 **Start Qty:** 1.00 **Cust Item ID:**

**Required Date:** 3/1/2011 **Req'd Qty:** 1.00 **Customer:**

**Reference:**

**Run Start** **Stop**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 140 | | 0.00 | | | | | | | |
| Crosstubes | Crosstubes | 0.00 | | | | | | | |

Crosstubes

**Memo**

1-Drill holes & ream using drill Jig DT8541 & DT8542 as per Dwg D206-667-143. Drill all (3) top holes.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8541 & DT8542 as per Dwg D206-667-143. Drill only the top (2) holes.

5-Drill pilot holes as per Dwg D206-667-143.Drill only the top (2) holes.

6-Drill Fwd rivet holes using drill Jig DT8787FWD as per Dwg D206-667-143. Note: Fwd side has 3x top holes.

7-Drill Aft rivet holes using drill Jig DT8787AFT as per Dwg D206-667-141.

8-C'sink holes as per Dwg D206-667-143. Allow rivet to sit below surface to compensate for paint.

9 -Scribe part # and batch # using vibrating stylus as per Dwg D206-667-143 Inside of Cuff(Donot engrave on outside of tube)

10-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D206-667-143

SAD/DP 11-03-07

SAD 11-03-07

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

# Work Order ID 66402

*Monday, February 14, 2011 3:13:02 PM*



**Item ID:** D206-667-103BL **Accept** **Setup Start** **Stop**

**Revision ID:**

**Item Name:** Crosstube Fwd, Blue

**Start Date:** 2/15/2011 **Start Qty:** 1.00 **Cust Item ID:**

**Required Date:** 3/1/2011 **Req'd Qty:** 1.00 **Customer:**

**Reference:**

**Run Start** **Stop**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 150 | Crosstubes Chemical Conversion | 0.00 | | | | | | | |
| HandFXtube | **Memo** | 0.00 | SAD 11-03-08 | | | (1) | | | |
| Hand Finishing Crosstubes | | | | | | | | | |
| 160 | QC3- Inspect Part Finish | 0.00 | | | | | | | |
| QC | **Memo** | 0.00 | 8/11/03/09 | | | | | | |
| Quality Control | | | | | | | | | |
| 170 | QC5- Inspect part completeness to step on W/O | 0.00 | | | | | | | |
| QC | **Memo** | 0.00 | 8/11/03/09 | | | (2) | | | |
| Quality Control | | | | | | | | | |

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

# Work Order ID 66402

*Monday, February 14, 2011 3:13:02 PM*



**Item ID:** D206-667-103BL **Accept** **Setup Start** **Stop**

**Revision ID:**

**Item Name:** Crosstube Fwd, Blue

**Start Date:** 2/15/2011 **Start Qty:** 1.00 **Cust Item ID:**

**Required Date:** 3/1/2011 **Req'd Qty:** 1.00 **Customer:**

**Reference:**

**Run Start** **Stop**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 180 | Outsource process - NDT per QSI038 4.1 | 0.00 | | | | | | | |
| Outsource2 | **Memo** | 0.00 | | | | | | | |
| Outsource process - NDT | CROSSTUBES | | | | | | | | |
| 190 | Packaging | 0.00 | | | | | | | |
| Packaging | **Memo** | 0.00 | | | | | | | |
| Packaging | Ensure copy of NDT results attached to work order. | | | | | | | | |
| 200 | QC5- Inspect part completeness to step on W/O | 0.00 | | | | | | | |
| QC | **Memo** | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

P/O: 13641

CL 11/03/10 (1)

4/3/11 (1)

11 03 11 (1)

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

# Work Order ID 66402

*Monday, February 14, 2011 3:13:02 PM*

**Item ID:** D206-667-103BL **Accept** **Setup Start** **Stop**

**Revision ID:**

**Item Name:** Crosstube Fwd, Blue

**Start Date:** 2/15/2011 **Start Qty:** 1.00 **Cust Item ID:**

**Required Date:** 3/1/2011 **Req'd Qty:** 1.00 **Customer:**

**Reference:**

**Run Start** **Stop**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 210 | SprayPaint | 0.00 | | | | | | | |
| SprayPaint | | | | | | | | | |
| | **Memo** | 0.00 | | | | | | | |
| Spray Painting | 1-Prime inside and outside crosstube as per QSI 005 4.2 | | | | | | | | |
| | 2-Paint outside crosstube with ~~White Imron~~ as per QSI 005 4.2 | | | | | | | | |
| | PRIME: B#115967 Deffleet Blue. Start Time:_____ Fininsh Time:_____ | | | | | | | | |
| | PAINT: B#115985 Start Time:_____ Finish Time:_____ | | | | | | | | |

AT 11 03 10 (x1)

Clear # B115949

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 220 | QC14- Inspect Spray Paint | 0.00 | | | | | | | |
| QC | | | | | | | | | |
| | **Memo** | 0.00 | | | | | | | |
| Quality Control | Wrap in plastic bag to protect from scratches | | | | | | | | |

11 03 11 (1)

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

# Work Order ID 66402

*Monday, February 14, 2011 3:13:02 PM*

**Item ID:** D206-667-103BL **Accept** **Setup Start** **Stop**

**Revision ID:**

**Item Name:** Crosstube Fwd, Blue

**Start Date:** 2/15/2011 **Start Qty:** 1.00 **Cust Item ID:**

**Required Date:** 3/1/2011 **Req'd Qty:** 1.00 **Customer:**

**Reference:**

**Run Start** **Stop**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 230 | Crosstubes | 0.00 | | | | | | | |
| Crosstubes | **Memo** | 0.00 | | | | | | | |
| Crosstubes | 1-Install support using 0.03" to 0.06" thick layer of magnobond 6398 per QSI 015. Let cure for 12h after installation and prior to packaging. Note: (2) Aft holes should be facing up. A/R Magnobond 6398 : LT 116227 | | | | | | | | |
| | 2-Install supports and clamps as per Dwg D206-667-143. Torque clamps to 80-100 in lb | | | | | | | | |
| | 3-Install nut plates as per Dwg D206-667-143. Touch-up rivet heads with Imron paint. | | | | | | | | |
| 240 | QC5- Inspect part completeness to step on W/O | 0.00 | | | | | | | |
| QC | **Memo** | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

LT 11-03-15

LT 11-03-16

11/03/12

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng. | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

# Work Order ID 66402

*Monday, February 14, 2011 3:13:02 PM*

**Item ID:** D206-667-103BL **Accept** **Setup Start** **Stop**

**Revision ID:**

**Item Name:** Crosstube Fwd, Blue

**Start Date:** 2/15/2011 **Start Qty:** 1.00 **Cust Item ID:**

**Required Date:** 3/1/2011 **Req'd Qty:** 1.00 **Customer:**

**Reference:**

**Run Start** **Stop**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 250 | Pick Kit | 0.00 | | | | 11/3/18 | | | |
| Packaging | **Memo** | 0.00 | | | | | | | |
| Packaging | | | | | | | | | |
| 260 | QC4- 100% Inspect kits for completeness | 0.00 | | | | KL | | | |
| QC | **Memo** | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |
| 270 | | 0.00 | | | | 11/3/18 | | | |
| Packaging | Packaging | | | | | | | | |
| Packaging | **Memo** | 0.00 | | | | | | | |
| | Identify and pack for shipping as per PPP D206-667-103<br>Location: _____<br>PPP Rev: 1 | | | | | | | | |

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

# Work Order ID 66402

*Monday, February 14, 2011 3:13:02 PM*



**Item ID:** D206-667-103BL **Accept** **Setup Start** **Stop**

**Revision ID:**

**Item Name:** Crosstube Fwd, Blue

**Start Date:** 2/15/2011 **Start Qty:** 1.00 **Cust Item ID:**

**Required Date:** 3/1/2011 **Req'd Qty:** 1.00 **Customer:**

**Reference:**

**Run Start** **Stop**

**Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

**QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|---|---|---|---|---|---|---|---|---|---|
| 280 | QC21- Final Inspection - Work Order Release | 0.00 | | | | | 11/3/21 | | |
| QC<br>Quality Control | **Memo** | 0.00 | | | | | | | |

CL 11/03/21

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

# Picklist Print



*Monday, February 14, 2011 3:12:58 PM*

**Work Order ID:** 66402

**Parent Item:** D206-667-103BL

**Parent Item Name:** Crosstube Fwd, Blue

**Start Date:** 2/15/2011 **Required Date:** 3/1/2011

**Start Qty:** 1.00 **Required Qty:** 1.00

**Comments:** IIP RevA: new issue DD .09.11.23 verified by:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AN5-30A<br>BOLT | | Purchased | No | | | 250 | Each | 80.0000 | 4 | 4 | 4 11/3/10 | | |

| Location | Loc Qty | Loc Code |
|---|---|---|
| ST339 | 80 | |
| 114941 | 30 | |
| 116003 | 50 | |

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AN5-32A<br>Bolt | | Purchased | No | | | 250 | Each | 149.0000 | 4 | 4 | 4 11/3/10 | | |

| Location | Loc Qty | Loc Code |
|---|---|---|
| ST340 | 149 | |
| 115016 | 38 | |
| 115108 | 50 | |
| 115589 | 60 | |
| 115698 | 1 | |

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AN5-7A<br>Bolt | | Purchased | No | | | 250 | Each | 208.0000 | 10 | 10 | 10 11/3/10 | | |

| Location | Loc Qty | Loc Code |
|---|---|---|
| ST337 | 208 | |
| 113149 | 100 | |
| 115936 | 8 | |
| 116516 | 100 | |

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

# Picklist Print

*Monday, February 14, 2011 3:12:58 PM*

**Work Order ID:** 66402

**Parent Item:** D206-667-103BL

**Parent Item Name:** Crosstube Fwd, Blue

**Start Date:** 2/15/2011 **Required Date:** 3/1/2011

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AN960JD516 NAS1149D0563J<br>Washer | Purchased | No | | | 250 | Each | 34.0000 | 18 | 18 | M116540 11/3/10 |

| Location | Loc Qty | Loc Code |
|---|---|---|
| ST | 34 | |
| 103694 | 18 | |
| 107534 | 12 | |
| 109287 | 4 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| AN970-4<br>Washer | Purchased | No | | | 250 | Each | 67.0000 | 12 | 12 | 11/3/10 |

| Location | Loc Qty | Loc Code |
|---|---|---|
| ST344 | 67 | |
| 115936 | 67 | 12 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| D206-667-103TRN<br>Crosstube Turning DetailL | Manufactured | No | | | 110 | Each | 2.0000 | 1 | 1 | |

| Location | Loc Qty | Loc Code |
|---|---|---|
| LG | 2 | |
| 64948 | 1 | |
| 64949 | 1 | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| D2873-043<br>Nut Plate Assembly | Manufactured | No | | | 230 | Each | 24.0000 | 2 | 2 | DP 11-3-3<br>ET 11-03-16 |

| Location | Loc Qty | Loc Code |
|---|---|---|
| LG | 22 | |
| 63497 | 2 | |
| 65375 | 20 | x 2 |
| ST | 2 | |
| 60981 | 2 | |

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

# Picklist Print

*Monday, February 14, 2011 3:12:58 PM*

**Work Order ID:** 66402

**Parent Item:** D206-667-103BL

**Parent Item Name:** Crosstube Fwd, Blue

**Start Date:** 2/15/2011 **Required Date:** 3/1/2011

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| D2873-045 | Manufactured | No | | 230 | Each | 24.0000 | 2 | 2 ET 11-03-15 |

Nut Plate Assembly

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| LG | 24 | | |
| 60982 | 4 | | |
| 63498 | 1 | | |
| 65132 | 19 | | x2 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| D2891-1 - Blue | Manufactured | No | | 230 | Each | 39.0000 | 2 | 2 ET 11-03-15 |

2.25 Support

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| LG | 39 | | |
| 50952 | 9 | | |
| 53773 | 20 | | |
| 62595 | 10 | | x2 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| D3595-063-395 | Manufactured | No | | 230 | Each | 115.0000 | 4 | 4 ET 11-03-15 |

RUBBER CUSHION

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| FP | 10 | | |
| 44667 | 10 | | |
| ST | 105 | | |
| 63368 | 45 | | x4 |
| 65361 | 60 | | |

cut (4)0.063" X 3.95"

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

# Picklist Print

*Monday, February 14, 2011 3:12:59 PM*

**Work Order ID:** 66402

**Parent Item:** D206-667-103BL

**Parent Item Name:** Crosstube Fwd, Blue

**Start Date:** 2/15/2011 **Required Date:** 3/1/2011

**Start Qty:** 1.00 **Required Qty:** 1.00

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MS20601-AD4W8 | Purchased | No | | 230 | Each | 204.0000 | 14 | 14 |

RIVET

ET 11-03-16

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| LG | 100 | | |
| 116119 | 100 | | x 14 |
| ST322 | 104 | | |
| 112203 | 104 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MS21042L5 | Purchased | No | | 250 | Each | 1,108.000 | 4 | 4 |

Nut

11/3/18 sf

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| ST139 | 26 | | |
| 114813 | 26 | | |
| ST300 | 1082 | | |
| 115594 | 386 | | 4 |
| 116105 | 496 | | |
| 116548 | 200 | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| MS21920-20 | Purchased | No | | 230 | Each | 61.0000 | 4 | 4 |

Clamp (per MIL-DTL-8783C)

ET 11-07-15

| Location | Loc Qty | Loc Code | |
|---|---|---|---|
| LG | 61 | | |
| 112624 | 2 | | |
| 114687 | 1 | | |
| 115736 | 8 | | |
| 116799 | 50 | | x 4 |

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

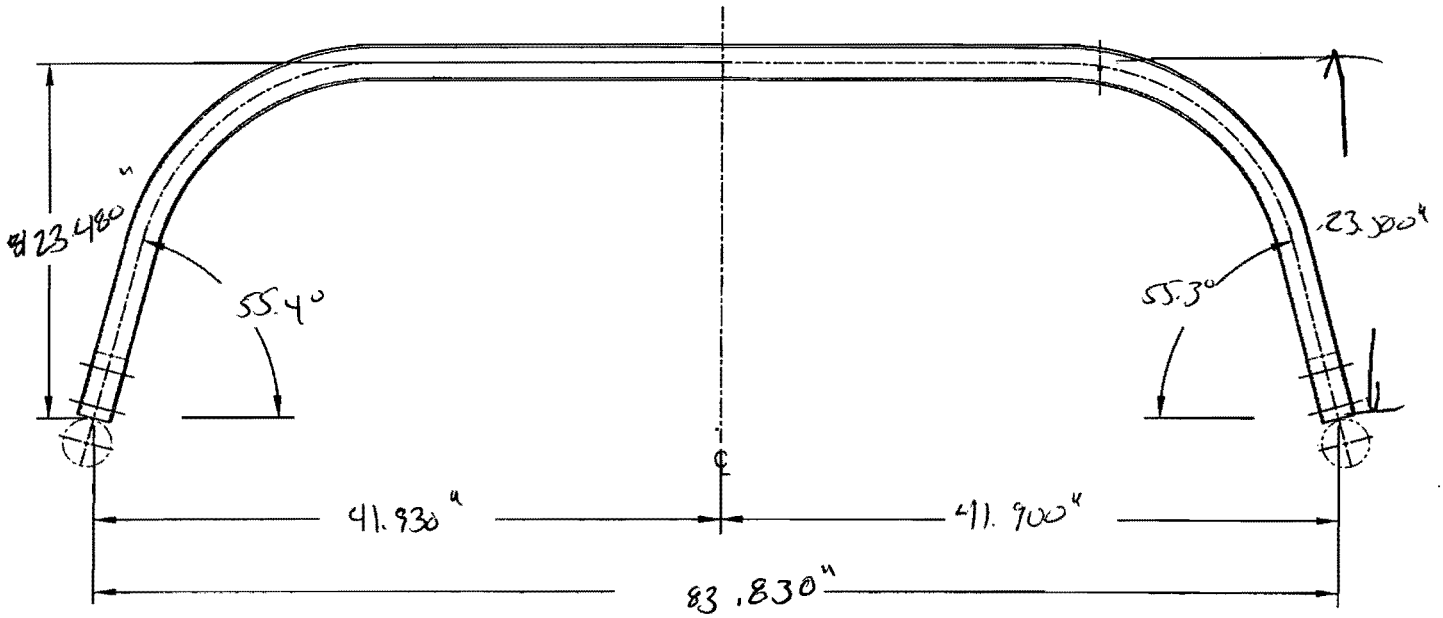
**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

| DART AEROSPACE LTD | Work Order: | 66402 |
|---|---|---|
| | | |
| **Description:** Crosstube High Fwd (206L) | Part Number: | D206-667-103 |
| | | |
| **Inspection Dwg:** D206-667-143 **Rev:** C | | Page 1 of 1 |

| Required Dimension | Min | Max |
|---|---|---|
| Height | 23.39 | 23.65 |
| 1/2 Span | 41.79 | 42.05 |
| Angle | 54 | 56 |
| Total Span | 83.58 | 84.10 |




| Comments |
|---|
| |
| |
| |
| |

| QC15 Inspection | |
|---|---|
| Date | 11/03/07 |

| Rev | Date | Change | Revised by | Approved |
|---|---|---|---|---|
| A | 07.02.06 | New Issue | KJ/JM | |
| B | 09.06.26 | Dimensions updated per Dwg Rev C | KJ | |
| C | 09.10.22 | Minimum height dimension revised | KJ | |

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

| Item | Qty -143 | Part Number | Description |
|---|---|---|---|
| | | | |
| 1 | X | D206-667-143 | CROSSTUBE ASSEMBLY (206L HIGH FWD) |
| | | | |
| 2 | 1 | D6002-115 | CROSSTUBE |
| 3 | 2 | D2873-043 | NUT PLATE |
| 4 | 2 | D2873-045 | NUT PLATE |
| 5 | 2 | D2891-1 | SUPPORT |
| 6 | 4 | D3595-063-395 | RUBBER CUSHION |
| 7 | 4 | MS21920-20 | CLAMP (OR MS21920-21) |
| 8 | 14 | MS20601AD4W8 | RIVET (OR NAS9302B-4-8) |
| | | | |
| 9 | A/R | MAGNOBOND 6398 | ROCKWELL SPECIFICATION RBO-120-023<br>ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE) |

**GENERAL NOTES:**

1) MATERIAL: MANUFACTURED FROM D6002-115
   FINISHED LENGTH = 104.98±0.020
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
   PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
   PAINT OUTSIDE PER DART QSI 005 4.2
3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
4) UNITS: INCHES UNLESS OTHERWISE NOTED.
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-143" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
7) WEIGHT: 15.5 lbs
8) PART IS SYMMETRIC ABOUT CENTERLINE.
9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
10) BEND PROGRESSIVELY WITH A MINIMUM OF 10 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
12) INSTALL D2891-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-395 RUBBER CUSHIONS TO SECURE THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

RELEASED

| REV. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| C | REVISE GENERAL NOTES/PART LIST (ZN D7-1); REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-395 WAS D2858-400-684 (ZN D6-2 & A5-2); REMOVED REF. & ADD TOLERANCE (ZN D3-3, C4-3, C5-3); RELOCATED FLAG #6 (ZN A8-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4. | RF | 08.11.06 |
| B | ADD HOLES AND NUT PLATES FOR COMPATABILITY WITH BHT/AA SKUDTUBES | PH | 05.07.26 |
| A | NEW ISSUE | CP | 00.11.17 |

| | | | |
|---|---|---|---|
| DESIGN | | **DART AEROSPACE LTD** | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | | DRAWING NO. | REV. C |
| MFG. APPR. | | D206-667-143 | SHEET 1 OF 4 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | CROSSTUBE ASS'Y (206L HIGH FWD) | NTS |
| DATE | 08.11.06 | | |

COPYRIGHT © 2000 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**Dart Aerospace Ltd**

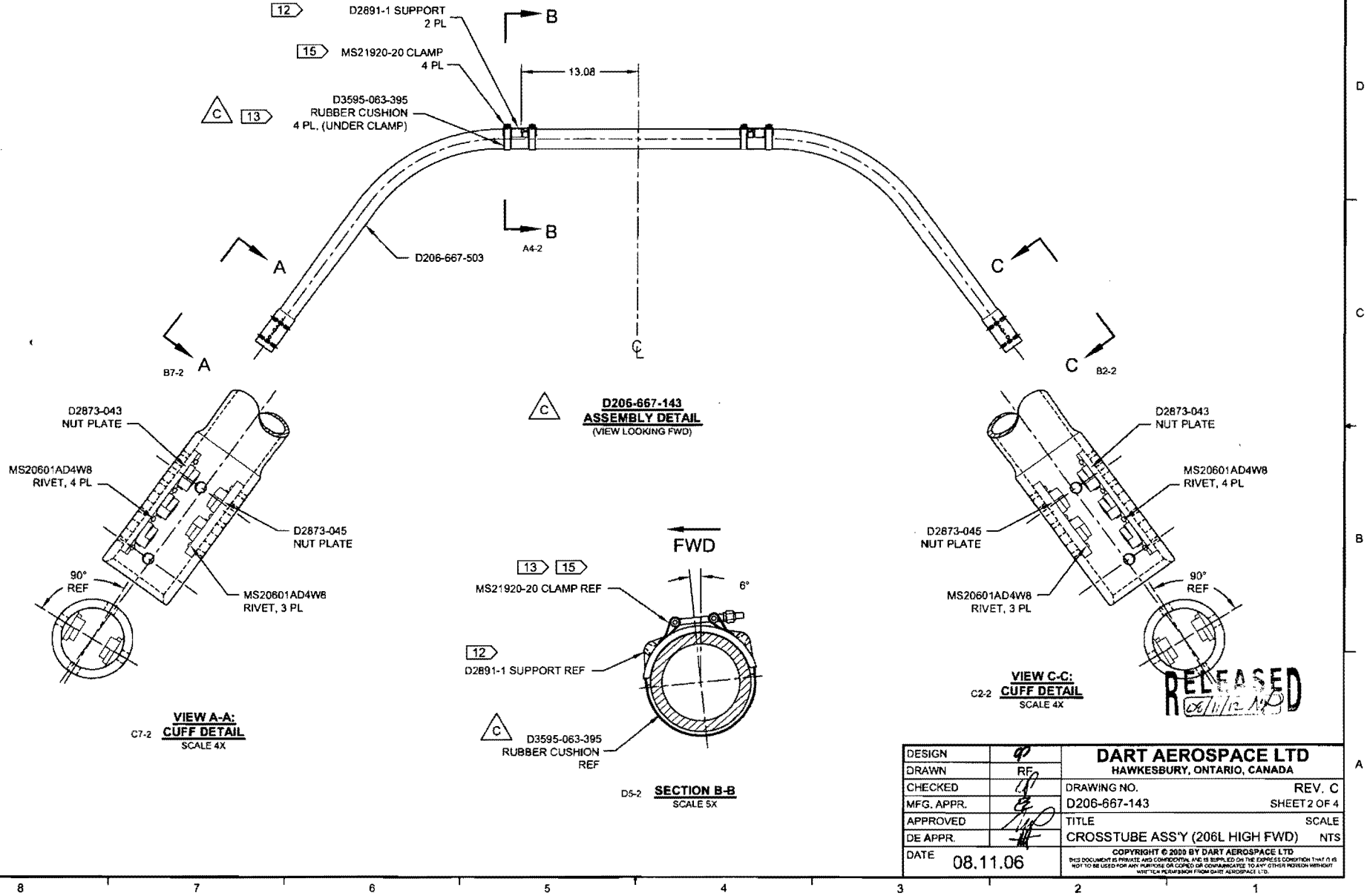
| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries




| | | | |
|---|---|---|---|
| DESIGN | | **DART AEROSPACE LTD** | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | | DRAWING NO. | REV. C |
| MFG. APPR. | | D206-667-143 | SHEET 2 OF 4 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | CROSSTUBE ASS'Y (206L HIGH FWD) | NTS |
| DATE | 08.11.06 | | |

COPYRIGHT © 2000 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**Dart Aerospace Ltd**

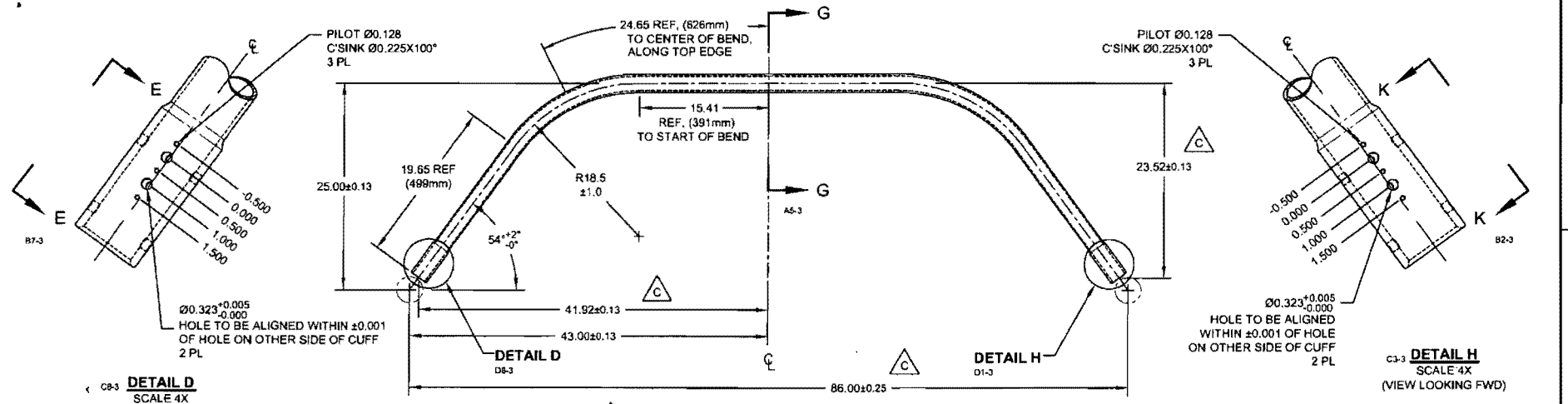
| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

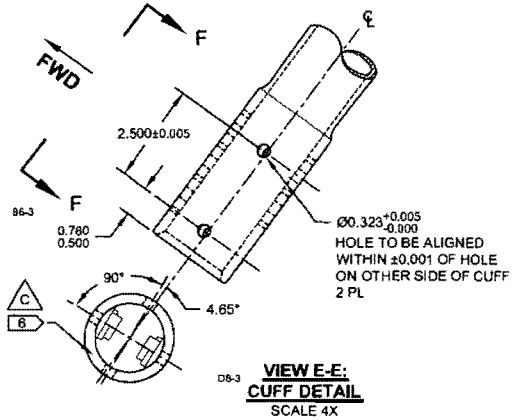
**NOTE:** Date & initial all entries



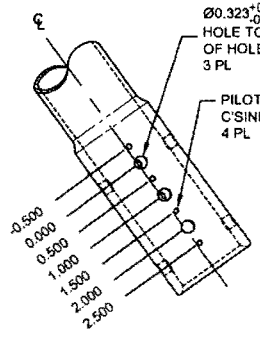

C8-3 **DETAIL D**
SCALE 4X
(VIEW LOOKING FWD)

C3-3 **DETAIL H**
SCALE 4X
(VIEW LOOKING FWD)

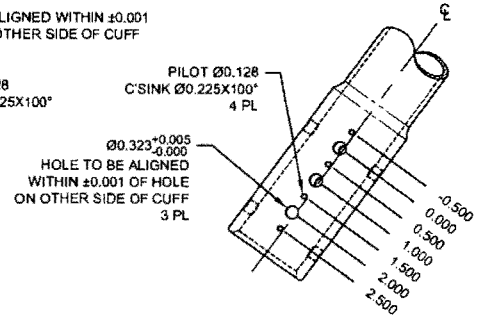
**D206-667-503**
**BENDING AND DRILLING DETAIL**
(VIEW LOOKING FWD)



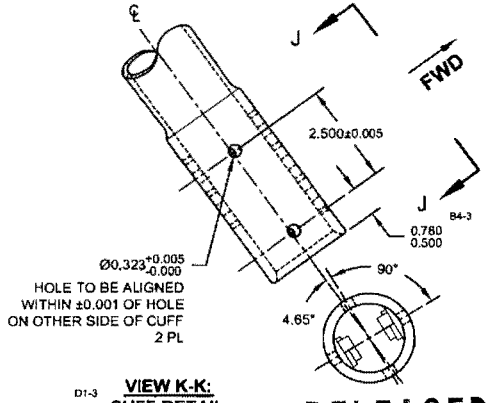

D8-3 **VIEW E-E:**
**CUFF DETAIL**
SCALE 4X



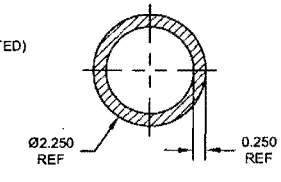

B7-3 **VIEW F-F**
(VIEW LOOKING AFT, ROTATED)




B2-3 **VIEW J-J**
(VIEW LOOKING AFT, ROTATED)




D1-3 **VIEW K-K:**
**CUFF DETAIL**
SCALE 4X




D4-3 **SECTION G-G**
SCALE 5X

RELEASED
05/11/2006

| | | | |
|---|---|---|---|
| DESIGN | | **DART AEROSPACE LTD** | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | | DRAWING NO. | REV. C |
| MFG. APPR. | | D206-667-143 | SHEET 3 OF 4 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | CROSSTUBE ASS'Y (206L HIGH FWD) | NTS |
| DATE | 08.11.06 | COPYRIGHT © 2006 BY DART AEROSPACE LTD | |

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**Dart Aerospace Ltd**

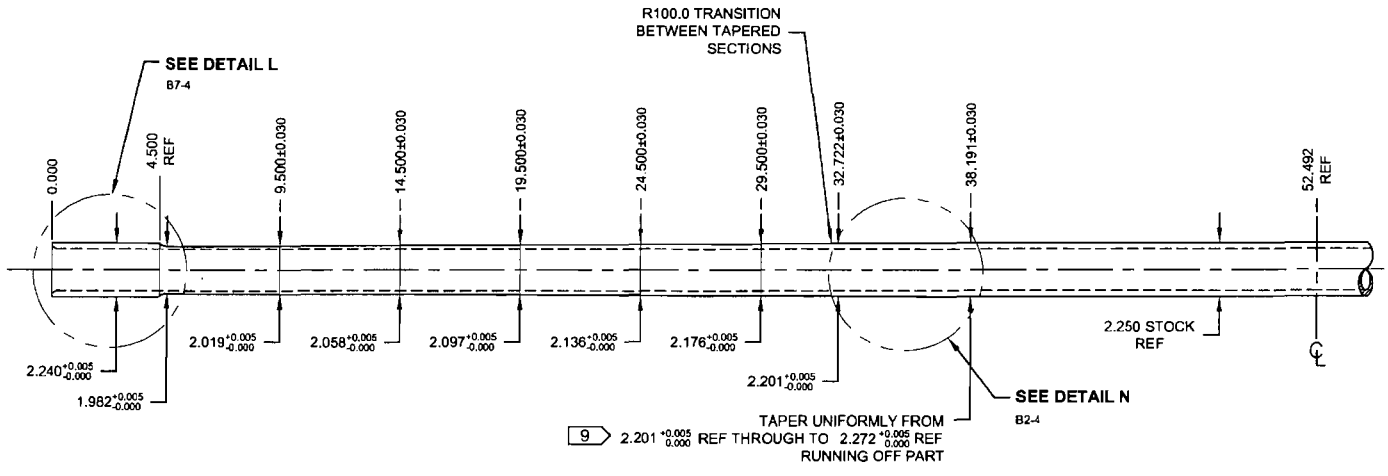
| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

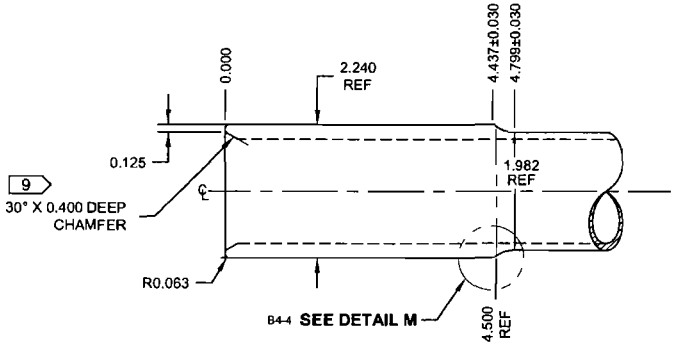
**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

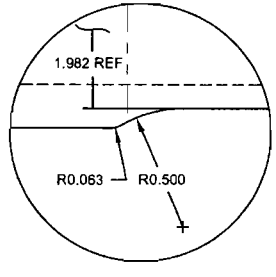
**NOTE:** Date & initial all entries



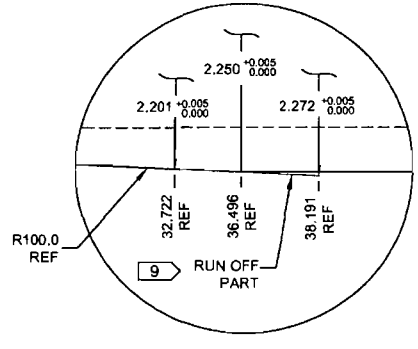

C **TURNING DETAIL**




D7-4 **DETAIL L: CROSSTUBE CUFF**
NOT TO SCALE




A6-4 **DETAIL M: CUFF TRANSITION**
NOT TO SCALE




C4-4 **DETAIL N: TAPER RUN-OFF**
NOT TO SCALE

RELEASED

| | | | |
|---|---|---|---|
| DESIGN | | **DART AEROSPACE LTD** | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | | DRAWING NO. | REV. C |
| MFG. APPR. | | D206-667-143 | SHEET 4 OF 4 |
| APPROVED | | TITLE | SCALE |
| DE APPR. | | CROSSTUBE ASS'Y (206L HIGH FWD) | NTS |
| DATE | 08.11.06 | | |

COPYRIGHT © 2000 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

**Dart Aerospace Ltd**

| W/O: | | WORK ORDER CHANGES | | | | | |
|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **PROCEDURE CHANGE** | **By** | **Date** | **Qty** | **Approval** Chief Eng / Prod Mgr | **Approval** QC Inspector |
| | | | | | | | |
| | | | | | | | |

**Part No:** _____ **PAR #:** _____ **Fault Category:** _____ **NCR:** Yes No **DQA:** _____ **Date:** _____

**Resolution:** _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **DATE** | **STEP** | **Description of NC** Section A | **Corrective Action** Section B | | | **Verification** Section C | **Approval** Chief Eng | **Approval** QC Inspector |
| | | | **Initial** Chief Eng | **Action Description** Chief Eng | **Sign & Date** | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**NOTE:** Date & initial all entries

ACUREN

# LIQUID PENETRANT TEST REPORT

P- 05499

PAGE 1 OF 1

CLIENT: DART AEROSPACE | DATE: MAR/10/2011 | TIME: AM ☑ PM ☐

ATTENTION: LINDA LACELLE/CHANTALE/IAN | ACUREN JOB NO.: 188-11-02109

ADDRESS: ABERDEEN RD. HAWKESBURY, ON | PO/WO NO.: 13641 | WORK LOCATION: AS ADDRESS | ACCEPTANCE STD.: ASTM 1417/051-038 | REV./DATE: 2005

PROJECT: WET-FLUORESCENT LIQUID PENETRANT INSPECTION ON 4 "CROSS-TUBES" OF THE

ITEM(S) EXAMINED: SEE BELOW

**JOB DESCRIPTION** | PROCEDURE NO. LT003 REV./DATE 2008 | TECHNIQUE NO. LT003 REV./DATE 2008

PART NO. | MATERIAL: ALODINE ALUMINUM | THICKNESS: N/A

SCOPE: PERFORMED A WET FLUORESCENT LIQUID PENETRANT INSPECTION ON 100% EXTERNAL SURFACE

**TEST DETAILS**

| | | | | | |
|---|---|---|---|---|---|
| METHOD | ☑ FLUORESCENT ☐ VISIBLE | | | ☑ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED | |
| FAMILY BRAND | MAGNAFLUX | | | BLACK LIGHT S/N 13793 ☑ OUTPUT > 1000 µ W/CM² ☑ AMBIENT < 2 fc | |
| PENETRANT | ZL-67 | MINIMUM DWELL TIME | 10 MIN. | LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT>100 fc @ SURFACE | |
| PENETRANT REMOVER | N/O | MINIMUM DRY TIME | >10 MIN. | OTHER | |
| DEVELOPER | SKD-S2 | MINIMUM DWELL TIME | 10 MIN. | LIGHT METER S/N | CAL DUE DATE N/C/c/2011 |
| DEVELOPER TYPE | ☑ NON AQUEOUS ☐ AQUEOUS | ☐ DRY | | | |

**TEST SURFACE**

| | | | | | |
|---|---|---|---|---|---|
| SURFACE CONDITION | ☐ AS GROUND | ☐ AS WELDED | ☐ MACHINED | ☐ SHOT BLASTED | ☑ CLEAN BARE METAL |
| SURFACE TEMPERATURE | ☐ < -4°C/ 20°F | ☐ -4°C/ 20°F TO 10°C/50°F | | ☑ 10°C/50°F TO 52°C/125°F | ☐ > 52°C/125°F |

**RESULTS-** (☐ METRIC ☐ IMPERIAL)

| | | |
|---|---|---|
| 1 | C.ROSSTUBE W.O. ID 66402 | ✓ |
| 2 | C.ROSSTUBE W.O. ID 66403 | ✓ |
| 3 | C.ROSSTUBE W.O. ID 66405 | ✓ |
| 4 | C.ROSSTUBE W.O. ID 67043 | ✓ |

NO RELEVANT INDICATION WAS DETECTED AS PER APPLICABLE STANDARD.

ITEM I.D: D206-667-103BL FWD
ITEM I.D: D206-667-103BL FWD
ITEM I.D: D206-667-203BL AFT
ITEM I.D: D206-667-203BL AFT

11-03-11

**Scope of Services**
*The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc's liability in respect of the services referred to herein exceed the amount paid for such services.*
**Standard of Care**
*In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.*

**SIGNATURES**

CLIENT REPRESENTATIVE: Ian Titley (PRINT) | (SIGNATURE) | DTR # E44638

TECHNICIAN (SIGNATURE): | REPORT REVIEWED BY:

NAME (PRINT): YVES DESROSIERS | NAME | INITIALS

| 1ST TECHNICIAN | | 2ND TECHNICIAN | |
|---|---|---|---|
| CGSB LEVEL 2 | SNT LEVEL 2 | CGSB LEVEL | SNT LEVEL |
| CGSB REG. NO 3049 | | CGSB REG. NO | |

WHITE – CLIENT COPY CANARY – OFFICE COPY PINK – TECHNICIAN COPY GOLD – OFFICE COPY